



Short Safety Subject

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www.bragg.army.mil/psbc-bm/PubsAndForms/ShortSafetySubjects.htm

Did You Know That...



- More Americans between the ages of 1 and 34 die as a result of motor vehicle injuries than any other cause.
- Lifetime odds are 1 in 3 that you will be seriously injured in a traffic accident, and 1 in 100 that you will be killed.
- Motor vehicle crash injuries produce more new cases of quadriplegia (paralysis below the neck) and paraplegia (paralysis below the waist) than all other causes combined.
- In major automobile injury cases 50% of the victims suffer brain damage, and 40% sustain spinal cord injuries.
- Motor vehicle crashes are a major cause of epilepsy.
- Seventy percent of deaths and injuries occur at speeds of 40 miles per hour or less and no more than 5 miles from home.
- There has been a decrease of 40% in fatalities in countries where seat belts are mandatory.

Americans today are vitally interested in current issues that can improve health and decrease chances of illness, disability or death from hazards in the home, community or in the work place. However, only a small fraction of our national research efforts has been directed toward a major killer in society. Traffic accidents account for more fatalities per year than homicides, deaths from work-related accidents or aviation deaths. Yet more than half of all road-related fatalities are automobile passengers who might have lived if they had used seat belts.

Your orthopedic surgeon recommends:

Use seat belts

Most fatalities from automobile injuries can be prevented by safely restraining passengers. In an accident there are two collisions. The first collision occurs when a car strikes an object, but death or injury occurs most frequently from the second "human" collision of the occupant against the interior of the vehicle or through ejection from the vehicle. Ejection is the most important cause of death in automobile accidents and occurs 10 times more often to unrestrained occupants. Seat belts also offer remarkable protection for occupants involved in frontal-impact collisions, reducing the chance of injury to the head or face by 60%.

Adjust head restraints

Increased protection from injury is also provided by head restraints, which have reduced the frequency of neck injuries by 50%. Fixed head restraints are nearly twice as effective as adjustable head restraints because most adjustable head restraints are left in the "down" position and do not adequately protect an occupant of average height.

Secure children

Traffic accidents are the leading cause of death in children over the age of one year, claiming more lives than any disease or other type of accident. Many more victims are permanently disabled. An unrestrained child in a crash behaves like an uncontrolled rocket, crashing into or through the windshield or violently striking other occupants. A university study showed that 25% of the children treated in one emergency room were injured not in crashes, but in swerves, stops and turns in cars.

Why not hold the child in your lap?

A child being held on an adult's lap has a significantly increased risk of being injured or killed. The person holding the child frequently survives, but may crush the child to death during the impact. Being a safe driver yourself is no excuse for you or your children to ride unprotected. The careless act of another driver could kill or injure your child, and you increase that likelihood if you hold the child or allow him or her to roam about the car.

The law in most states now requires that infants and young children must be restrained in crash tested safety seats appropriate to the child's age and size. A child who is used to a safety device from an early age will continue to accept restriction as a matter of course, particularly if the parents set a good example by using seat belts. Don't risk your child's life.

Seat belts and pregnant women

The seat belt is the best protection provided in an automobile for the pregnant woman and her unborn child. In severe crashes, the death rate for unbelted pregnant women is double that of those who wear seat belts. If an unbelted mother-to-be is ejected, she has a six times greater risk of death or severe injury, and the likelihood of fetal loss is four times greater than if she were confined within the vehicle. In very severe crashes, there is a possibility of belt-induced injury to the woman and her fetus, but the woman's overall chances for survival and avoidance of serious injury are significantly better if she wears a properly applied seat belt.

Excuses for non-use

Common excuses given for not using seat belts are based on myths, such as the following:

- **Myth:** Seat belts trap occupants in their vehicles, especially in cases of fire and submersion.
- **Fact:** Deaths by incineration or drowning account for less than 1/10th of 1% of motor vehicle related trauma. More importantly, a restrained occupant who remains conscious by avoiding contact with the vehicle's interior is more likely to escape from these rare situations.
- **Myth:** Seat belts cause injuries.
- **Fact:** Injuries due to seat belts have been reported. In these rare situations, however, the belt was inappropriately worn or the crash was so severe that the occupant would have been more seriously or fatally injured without a seat belt.
- **Myth:** Seat belts are needed only for long trips and high-speed expressway driving.
- **Fact:** Most crashes occur within a few miles of home at speeds under 35-40 mph. Unbelted occupants have been killed at speeds of less than 12 mph - parking lot speed.
- **Myth:** The "other driver" is usually the "bad driver" who causes the crash.
- **Fact:** This may be true, but "good drivers" are equally vulnerable to injury once a crash has occurred.
- **Myth:** I'd be better off if I'm thrown clear.
- **Fact:** Most passengers ejected from cars die - and most of them are ejected through the windshield.

Isn't it my right to choose to wear a seat belt or not?

A leading argument against required seat belt usage is the infringement on an individual's right to choose to use a seat belt or not. This argument does not hold up when one weighs the costs to society in terms of medical, rehabilitation, unemployment, and welfare services against an individual's "right" to injure or kill himself by not buckling up.

In addition, the "seat belt defense" is being used more frequently and in some legal cases, awards for damages to the "victim" have been substantially reduced if it is decided that the injured party contributed to his or her injury by not wearing a seat belt.

Seat belts are effective

Virtually every study ever conducted indicates that lap and shoulder safety belts can reduce the risk of fatal or serious injury by between 40% and 55%.

Among front seat passenger vehicle occupants, seat belts saved approximately 2,200 lives in 1986, 1,750 in states with seat belt use laws, according to the National Center for Statistics and Analysis.

Four years after legislation mandated the use of seat belts in the Australian state of Victoria in 1970, occupant fatalities decreased by 37% and injuries by 41%, including a 27% decrease in spinal cord injuries.

This information has been prepared by the American Academy of Orthopedic Surgeons and is intended to contain current information on the subject from recognized authorities. However, it does not represent official policy of the Academy and its text should not be construed as excluding other acceptable viewpoints. Persons with questions about a medical condition should consult a physician who is informed about the condition and the various modes of treatment available.